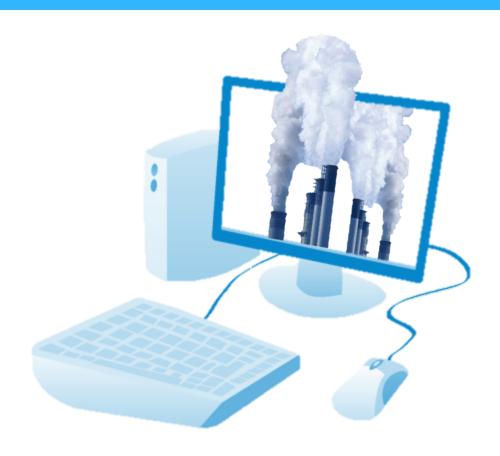
# **CAERS**: CENTRALIZED AIR EMISSIONS REPORTING SYSTEM

**USER MANUAL FOR COMPANIES AND CONSULTANTS** 





# **INTRODUCTION**

Centralized Air Emissions Reporting System (CAERS) is an online portal and database for oil and gas emissions developed by the Utah Division of Air Quality (UDAQ) and Utah Department of Technology Services (DTS).

The Utah Division of Air Quality (DAQ) seeks to facilitate improved oil and gas emissions inventory tracking and collections, data accuracy, and distribution of this emissions data to the public and to the National Emissions Inventory (NEI). The purpose of CAERS is to extend the use of the current oil and gas online system to include, in addition to the existing ability to submit permit applications, the ability to submit a facility registration for all oil and gas facilities regardless of size, and the ability to more easily submit a tri-annual emissions inventory for oil and gas facilities. Additionally the system will be designed to streamline the handling of emissions data by adapting the current set of Python scripts to automate the process of importing the data to a more robust Oracle database. These additions and improvements to the existing system will provide a central location to submit all air quality based oil and gas data in an efficient and streamlined manner. This central system will facilitate the distribution of summarized emissions data directly to the DAQ webpage for public consumption and export a data file correctly formatted for submittal to the National Emissions Inventory (NEI).

This user manual and much of the CAERS design were generated by Lexie Wilson. If you have any questions or problems with the system, please do not hesitate to contact me via email or on the phone.

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## GOAL 1: AIR QUALITY OIL AND GAS SOURCE REGISTRATION (PHASE 1)

On January 26<sup>th</sup>, 2018, the Air Quality Board passed R307-505, which establishes requirements for oil and gas sources to register with the Division of Air Quality.

Phase 1 of CAERS provides online services for the following actions:

- allows oil and gas operators to submit registration information via an online portal by uploading Excel workbooks; operators may contact UDAQ for help or questions
- enables engineers at UDAQ to review, comment, and approve operator submissions; manage user and company information; generate and send invoices
- equips clerks at UDAQ to generate and distribute invoices to operators who owe fees to UDAQ
- entrusts administrators to manage all of the above, as well as remove blocks from pages that may have been left open by other reviewing engineers

#### **ELIGIBILITY**

The registration requirement applies to new and existing industries involved in oil and natural gas exploration, production, and transmission operations; well production facilities; natural gas compressor stations; natural gas processing plants and commercial oil and gas disposal wells, and evaporation ponds. Sources with an approval order are exempt from registration. The flowchart in Figure 1 guides users through various registration eligibility scenarios.

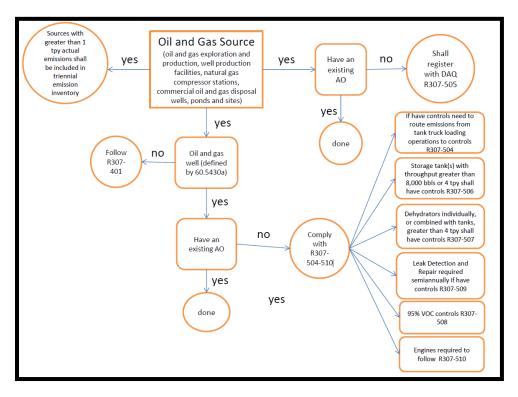


Figure 1: Oil and gas source registration flowchart

Complete rules regarding registration and associated oil and gas regulations (R307-501 to R307-510) can be found at: https://rules.utah.gov/publicat/code/r307/r307.htm

### **ACCESS**

CAERS and its associated data are not accessible to the public. In order to access CAERS, users must have an established UMD (Utah Master Directory, also referred to as Utah-ID), previously filed a notarized data submission form with either Utah Division of Oil, Gas, and Mining (DOGM) or UDAQ, and approval from an administrator or engineer at UDAQ.

First, visit <a href="http://caers.utah.gov">http://caers.utah.gov</a>. Alternatively, you can visit <a href="https://deq.utah.gov/air-quality/oil-gas-source-registration-air-quality">https://deq.utah.gov/air-quality/oil-gas-source-registration-air-quality</a>. Click the blue button that says "CAERS" to be directed to the system portal.

Access to CAERS requires a UMD. Users will be directed to the page shown in Figure 2. If a user does not have an active UMD account, click "Create Account" and follow the instructions. Questions regarding the UMD login system should be directed to DTS.



Figure 2: UMD Login screen.

#### **USER: PUBLIC**

All users who attempt to access CAERS with a UMD login will be automatically designated as "Public" users. A public user does not have access to the system. An administrator or engineer will manage public users by changing their imported UMD information profile role from "Public" to any of the following user types.

After entering one's UMD for the first time, every user will arrive at the landing page shown in Figure 3.

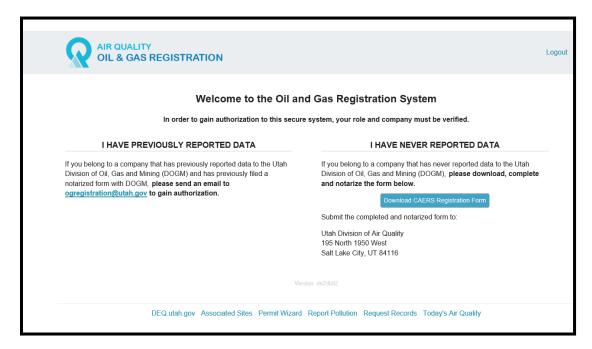


Figure 3: landing page for public users

The text on this landing page only applies to oil and gas operators who will be submitting emissions data to CAERS. If you are a UDAQ employee who is seeking access to CAERS for administrative purposes, please notify Lexie Wilson (<a href="lexieoutless: lexieoutless: lexieoutless:

## **Gaining Access to CAERS**

In order to report data to UDAQ, companies must first gain access to CAERS. There are two pathways though which access may be granted:

- 1. The company attempting to access CAERS is new to oil and gas data reporting.
  - a. The User will download the CAERS Registration Form by clicking the large blue button in Figure 3.
  - b. User will fill out the form and have it notarized by a Notary Public. An updated list of notaries public can be found here: <a href="https://secure.utah.gov/notary/search.html">https://secure.utah.gov/notary/search.html</a>
  - c. Completed and notarized forms should be mailed to the following address:

Utah Division of Air Quality c/o Lexie Wilson P.O. Box 144820 Salt Lake City, UT 84114-4820

- 2. The company attempting to access CAERS has reported any data to DOGM in the past.
  - DOGM requires companies to fill out the form exhibited in Figure 4, notarize it, and mail it to the DOGM offices.
  - b. If a company has already completed this process with DOGM, UDAQ will not require the company to file and notarize our data reporting forms. Alternatively, the company must contact UDAQ and provide proof of a previous form transaction with DOGM.

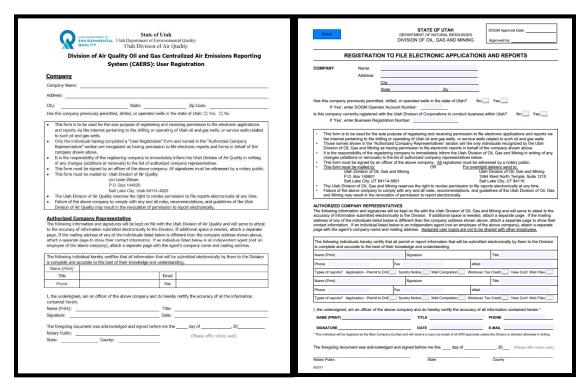


Figure 4: (Left) UDAQ Registration form to be filled and notarized for access to CAERS; (Right) DOGM form which, if operators have already filed and notarized with DOGM, will be accepted in place of the UDAQ Registration form.

Once all forms have been received and approved by UDAQ, the company will gain access to CAERS through a number of assigned users. These assigned users may be company employees or consultants, and full access to CAERS by those users will be available simply via UMD login.

**NOTICE TO CONSULTANTS:** If a consultant is submitting registration workbooks to CAERS for more than one company, they need to fill out and notarize the form in Figure 4 (left) for **each company** by which the consultant is contracted. Additionally the consultant *must* contact UDAQ to change their company authorization and association before submitting any data on behalf of a company. **Please contact Lexie Wilson at 801-536-0022 or**<a href="mailto:lexiewilson@utah.gov">lexiewilson@utah.gov</a> for these types of changes. Failing to do so will result in sending new data to an incorrect company – this is very difficult to undo. Please do not hesitate to contact UDAQ!

## **Workbook Completion**

Oil and gas emissions sources are required to register with the State of Utah according to R307-505 as of January 26<sup>th</sup>, 2018. An owner or operator of an identified oil and gas source must register with the Utah Division of Air Quality (UDAQ) 30 days prior to commencing operation. Owners or operators of an identified oil and gas source that is in operation before January 1, 2018 must register UDAQ by July 1, 2018. Additionally, an owner or operator shall update the registration information within 30 days of any of the following: change to company name, removal or addition of control devices, or termination of operation. Registration allows UDAQ to gain greater understanding about the sources that contribute to emissions throughout the state. This Microsoft Excel workbook is designed to streamline the registration process. The workbook was also designed to mimic portions of the 2017 emissions inventory workbook as an effort to save operators some time, and therefore some fields may be copied from the 2017 emissions inventory workbook into this Registration workbook.

Additional information and workbook downloads may be accessed at: <a href="https://deq.utah.gov/air-quality/oil-gas-source-registration-air-quality">https://deq.utah.gov/air-quality/oil-gas-source-registration-air-quality</a>

To begin, open the Excel file named "Utah\_O&G\_Registration\_Workbook." Tabs identifying worksheets that are linked and interactive will be displayed across the bottom of the workbook. Fields shaded in grey should not be modified by the user unless the instructions for that field explicitly state to do so. Fields that are shaded in pink are optional, and are not required to be provided by the user. Worksheets in this workbook include "Certification Statement", "Operator Info", "Sources List", "Associated API #s", "Installed Equipment", and "Equipment Specifications."

#### ENTERING DATA IN THE WORKBOOK

Most fields are modifiable and can be filled in by the operator; however any fields that are static parameters and should not be adjusted are shaded grey. The workbook also includes several drop-down lists which must be selected by the user, and once selected will appear in a blue font. When entering data into the worksheets, be sure to enter the values in exactly the same units that are listed. Units are not modifiable since the calculations in the workbook depend on continuity of units. The current units are standard for calculating emissions at oil & gas operations.

#### **INCLUDED WORKSHEETS**

#### **CERTIFICATION STATEMENT**

This sheet includes a statement certifying that all information entered into the submitted workbook is true and correct to the best of your knowledge. This certification must be accepted in order to complete the registration.

#### **OPERATOR INFORMATION**

This sheet is for providing basic operator information such as name and address as well as at least one person of contact, and their relevant information, for the operator. Please provide the most recent available information.

- 1. Operator Name Provide the full name of the operator (text only field).
- 2. Operator Address Provide the address for the operator, including: Street Address, City (text only), State (text only), and Zip code (numeric only).
- 3. Environmental Contact Name Provide the name of the main contact for the operator (text only).
- 4. Environmental Contact Title Provide the contact title for the operator's main contact (text only).
- 5. Environmental Daytime Phone Number Provide the phone number for the operator's main contact. *Please enter the phone number without any dashes, spaces, or parentheses.*
- 6. Environmental Email Provide the email address for the operator's main contact.
- 7. Local Contact Name Provide the name of the local contact for the operator (text only).
- 8. Local Contact Title Provide the contact title for the operator's local contact (text only).
- 9. Local Daytime Phone Number Provide the phone number for the operator's local contact. *Please enter the phone number without any dashes, spaces, or parentheses.*
- 10. Local Email Provide the email address for the operator's local contact.
- 11. Alternate Contact Name Optionally provide an alternate contact for the operator (text only).
- 12. Alternate Contact Title Optionally provide the contact title for the operator's alternate contact (text only).
- 13. Alternate Phone Number Optionally provide the phone number for the operator's alternate contact. *Please enter the phone number without any dashes, spaces, or parentheses.*
- 14. Alternate Email -- Optionally provide the email address for the operator's alternate contact.

#### **SOURCES LIST**

A source is defined in R307-101-2: "Any structure, building, facility, or installation which emits or may emit any air pollutant subject to regulation under the Clean Air Act and which is located on one or more continuous or adjacent properties and which is under the control of the same person or persons under common control. A building, structure, facility, or installation means all of the pollutant-emitting activities which belong to the same industrial grouping. Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same "Major Group" (i.e. which have the same two-digit code) as described in the Standard Industrial Classification Manual, 1972, as amended by the 1977 Supplement (US Government Printing Office stock numbers 4101-0065 and 003-005-00176-0, respectively)." This includes new and existing sites involved in oil and natural gas exploration, production, and transmission operations; well production facilities; natural gas compressor stations; natural gas processing plants and commercial oil and gas disposal wells, and evaporation ponds. Each of these sources should be listed in a separate row on this sheet.

**Note:** Sources are referred to as facilities in the 2017 Utah Air Agencies Oil and Gas Emissions Inventory Workbook. Any facilities provided in the emissions inventory should be listed as sources in the registration.

1. Source Name – Provide the full name of the source.

- 2. Source Unique ID # This field does not need to be completed by the operator. This field is automatically generated by the workbook. *Note: This field should be used as the main identifier for each facility for the remainder of the workbook.*
- 3. Latitude Provide the latitude of the source up to 5 digits after the decimal. Only numeric, decimal values will be accepted. Latitudes are restricted to Utah boundaries, between 36 and 43 degrees N.
- 4. Longitude Provide the longitude of the source up to 5 digits after the decimal. Only numeric, decimal values will be accepted. Longitudes are restricted to Utah boundaries, between -155 and -109 degrees E.
- 5. County Provide the county in which the source is located. Use the pull down menu to select a county.
- 6. Startup Date Provide the startup date of your source. If your source is new and began operations after January 1<sup>st</sup>, 2018, list the precise date in MM/DD/YYYY. If you have an existing source that began operations before January 1<sup>st</sup>, 2018, write in "Before January 1, 2018".
- 7. Standard Industrial Classification (SIC) code Provide the SIC code for your source. Only 4 digit, numeric values are accepted.
- 8. General Source Type Use the pulldown menu to select your general source type. Use the pull down menu to select the type.
  - a. Production Facility
  - b. Midstream Facility
  - c. Wastewater Disposal Facility
  - d. Water Injection Facility
  - e. Solid Waste Facility
  - f. Other: Please note type in comments field
- 9. Source Description/Comments Provide any necessary additional information about your source. If Option F "Other" was selected in General Source Type, this section must be filled out.

## **ASSOCIATED API #'S**

This sheet is for providing a list of any API #s associated with each source listed in the sources list tab.

- 1. Source Unique ID # Use the pull down menu to select the Source Unique ID # that was assigned to the facility in the Sources List tab.
- 2. No Associated APIs or >10 Associated APIs? Use the pull down menu to select "Yes" if your source has either no associated APIs or more than 10 associated APIs. If you select "Yes" for a given source, *do not* fill out the remaining columns in this sheet. Select "No" if your source has up to 10 associated APIs, and enter those corresponding API numbers in the remaining columns.
- 3. API # 1 #10 Provide API numbers associated with your source in these columns. Only 10 digit APIs are accepted; do not include well bore values appended to APIs.

## **INSTALLED EQUIPMENT**

This sheet is for providing details about any equipment installed on each source listed in the sources list tab.

1. Source Unique ID # - Use the pull down menu to select the Source Unique ID # that was assigned to the facility in the Sources List tab.

- 2. Tanks Use the pull down menu to select "Yes" if you have tanks installed on your site, or "No" if you do not have tanks installed.
- 3. Dehydrators Use the pull down menu to select "Yes" if you have dehydrators installed on your site, or "No" if you do not have dehydrators installed.
- 4. Pneumatic Controllers Use the pull down menu to select "Yes" if you have Pneumatic Controllers installed on your site, or "No" if you do not have Pneumatic Controllers installed.
- 5. Engines Use the pull down menu to select "Yes" if you have Engines installed on your site, or "No" if you do not have Engines installed.
- 6. Control Device Use the pull down menu to select "Yes" if you have any type of control device installed on your site, or "No" if you do not have control devices installed.
  - a. Combustor
  - b. VRU
  - c. Condenser
  - d. No Control
- 7. Engines: Electric Powered Use the pull down menu to select "Yes" if you have electric engines installed on site, or "No" if do you have no engines or only non-electric engines installed on site.
- 8. Control Type Use the pull down menu to select what type of controls you have installed. If you selected "No" under Control Device, leave this column as the default "No Control."
- 9. Percent Control Enter the level of control (%) provided by your control device. Leave this field as "N/A" if you selected "No Control" in the Control Type column.

## THROUGHPUT AND EMISSIONS

The following three columns are designed to collect recent throughput information, and in some cases, emissions calculations. Only enter information into EITHER column I (oil throughput) OR column J (condensate throughput). Include your most recent annual throughput values in barrels.

In some cases, the green text in column K (Calculated Emissions) will read "Enter Emissions Here & Provide Supplementary Data." If you see this message, you must enter your calculated emissions in column K. Otherwise; calculated emissions information is not required.

- 10. Annual Oil Throughput (BBL) Provide annual oil throughput in barrels if you operate an oil facility. Numeric only.
- 11. Annual Condensate Throughput (BBL) Provide annual oil throughput in barrels if you operate a gas facility. Numeric only.
- 12. Calculated Emissions Showing <4 tons per year If prompted, provide calculated emissions showing less than 4 tons per year from your source. Please send supplementary data to <a href="https://ocentrology.org/green/completed/">OGregistration@utah.gov</a> alongside your completed workbook.

13. Engines, Electric Powered – Use the pull down menu to select "Yes" if you have installed electric powered engines. This column defaults to "No" if no engines are installed at the source.

#### **EQUIPMENT SPECIFICATIONS**

This sheet is for providing a list of any non-electric engines installed at the source. Do not report electric engines. This sheet may be left blank if no engines or only electric engines are installed at the source. Compliance inspectors at the Division of Air Quality will use this information to ensure both Federal and State level compliance.

- 1. Source Unique ID # Use the pull down menu to select the Source Unique ID # that was assigned to the facility in the Sources List tab.
- 2. Make Provide the make of your non-electric engine. Text only.
- 3. Model Provide the model of your non-electric engine.
- 4. Manufacturer Year (YYYY) Provide the manufacturer year of your non-electric engine. 4 digit years only.
- 5. Horse Power Provide the horse power of your non-electric engine.
- 6. Engine Category Use the pull down menu to select the category of your non-electric engine.
  - a. Natural Gas-Fired Turbine
  - b. Distillate Oil-Fired Turbine
  - c. Natural Gas 2-Stroke Lean Burn
  - d. Natural Gas 4-Stroke Lean Burn
  - e. Natural Gas 4-Stroke Rich Burn
  - f. Diesel Industrial Engine <600 hp
  - g. Gasoline Industrial Engine <250 hp
  - h. Diesel Large Industrial Engine >600 hp
  - i. Duel Fuel Large Industrial Engine >600 hp
  - j. >12/1/2011,  $100 \le hp < 500$
  - k. >7/1/2010, hp  $\geq 500$
  - I. >7/1/2008 to 12/31/2010,  $100 \le hp < 500$
  - m. >7/1/2007 to 7/30/2010, hp  $\geq 500$
  - n. Emergency > 1/1/2009, hp > 500
  - o. Emergency > 1/1/2009,  $130 \le hp < 500$
  - p. Mod/Reconst: >6/12/2006 to <7/1/2007, 25 < hp < 500
  - q. Mod/Reconst: >6/12/2006 to <7/1/2007, hp  $\ge 500$
  - r. >7/1/2008, 25 < hp < 100
  - s. Emergency > 1/1/2009, 25 < hp < 100
  - t. Emergency > 1/1/2009,  $100 \le hp < 130$
- 7. Fuel combustion type Use the pull down menu to select the fuel combustion type of your non-electric engine.
  - a. Natural Gas
  - b. Diesel
  - c. Propane
  - d. Field Gas

#### SAVING THE WORKBOOK

Once your workbook has been filled out, save the excel file as

"Utah\_O&G\_Registration\_Workbook\_CompanyName" replacing 'CompanyName' with your own company's name.

You may be prompted to submit information regarding calculated emissions for your particular source (see section **Installed Equipment**). If this is the case, please submit the following documentation alongside your completed workbook:

- Site specific sampling data (composition data).
- Emissions calculations using direct site-specific sampling data and any software program or calculation methodology in use by industry that is based on AP-42 Chapter 7

Please email any supplementary materials to <a href="OGregistration@utah.gov">OGregistration@utah.gov</a>.

#### UPLOADING THE WORKBOOK

Log into your CAERS account using your UMD username and password. You should arrive at the screen similar to the one exhibited in Figure 5.

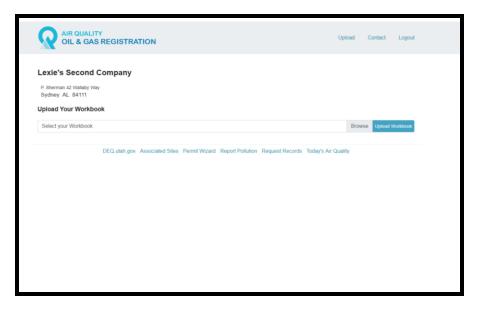


Figure 5: Workbook upload screen

- 1. Click "Browse"
- 2. Locate your completed workbook in your file directory (should have name similar to Utah\_O&G\_Registration\_Workbook\_CompanyName.xlsx)
- 3. Click "Upload Workbook"

CAERS will process your workbook data and attempt to enter it into our online database. If there are any errors in uploading the workbook, CAERS will redirect to an errors report, which can be printed. CAERS will **not** upload any part of a workbook that contains errors. **All** errors must be fixed before **any** data will be entered to the system. Click "Upload" from the top menu bar again to resubmit an updated workbook.

If you run into any issues while uploading your workbook (i.e. you do not receive confirmation emails, stuck on a blank white page, etc.), try opening CAERS in a new or incognito browser, clearing your cache, and pressing the refresh button on your browser.

#### TROUBLESHOOTING AND CONTACTING UDAQ

If you run into any issues while uploading your workbook, click the "Contact" button on the menu bar at the top of CAERS. Here, you may complete a contact form to send your questions or concerns to UDAQ. Phone numbers and emails for contacting UDAQ directly are also available here.

# GOAL 1: AIR QUALITY OIL AND GAS SOURCE REGISTRATION (PHASE 2)

Phase 2 of Goal 1 will improve upon the CAERS registration system. This improvement is still in development. We appreciate your input as your utilize Phase 1 of CAERS. Please make suggestions and voice concerns over Phase 1 in the **contact box** (see *Troubleshooting and Contacting UDAQ* section on page 12) so that appropriate changes may be addressed in Phase 2 of Goal 1.

Phase 2 of Goal 1 is expected to go live in 2018.